

1 FEBRUARY 2003



Safety

**COMBAT DEFENSE FIELD TRAINING
EXERCISES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: 60AMW/SEW (MSgt Philip Morales)
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This instruction implements AFD 91-2, *Safety Programs*. It establishes the Explosives, Firearms, and Hazardous Materials (HM) Transportation Safety Programs for Travis Air Force Base in accordance with AFMAN 91-201, *Explosives Safety Standards*. It applies to all 60th Air Mobility Wing, tenant, reserve activities, and personnel assigned or attached to Travis AFB.

SUMMARY OF REVISIONS

This revision incorporates AMC Special Interest Item, SII 00-002, *Procedures for Accountability, Storage and Use of Live and Blank Ammunition*. Also it clarifies communication procedures in paragraph **2.1**. It updates the names of base organizations throughout the document. Clarifies procedures for simulated boobytraps in paragraph **5.2.2**. Restricts fueling vehicles in paragraph **8.5**. **A bar (|) indicates a change since the last edition.**

1. General.

1.1. This instruction outlines procedures for the use of specific explosive items used in combat defense field training exercises. The use of explosive items not covered in this instruction during combat defense field training exercises or other types of exercises involving the use of explosives must be outlined in operating instructions (OI) developed in accordance with (IAW) AFMAN 91-201. This instruction, in conjunction with the applicable references listed will be used for conducting training of personnel and planning of combat defense field training exercises. A copy of this instruction will be available at the exercise site.

1.1.1. Commanders and supervisors are responsible for ensuring personnel are properly trained, exercises are thoroughly planned, and requirements are stringently complied with. Individuals are responsible for full compliance with all instructions given.

2. General Safety Requirements.

2.1. Explosives will be handled, transported, and used only by personnel trained in the task to be performed.

2.1.1. Explosives will not be tumbled, thrown, dropped, or handled in a rough manner.

2.1.2. No attempt will be made to disassemble, modify, or alter explosive items; or to use in a manner other than their intended purpose.

2.1.3. If abnormal conditions relating to the safe configuration of an explosive item are noted, no attempt will be made to use or correct the condition. Explosive Ordnance Disposal (EOD) assistance will be required.

2.1.4. Explosive items will be stored and transported in their storage and shipping container.

2.1.5. Only the quantity of munitions necessary for a specific operation will be drawn from storage. This will be identified in the exercise plan IAW paragraph 3.

2.1.6. A pre-exercise safety briefing will be conducted for all personnel before deployment to the exercise site. Exercise plans developed IAW paragraph 3. will identify specific times, locations, and briefer. The briefing must include the following as a minimum (See Attachment 4 for example).

2.1.6.1. Hazards and precautions for the handling and use of the explosives involved.

2.1.6.2. Range/exercise area safety criteria.

2.1.6.3. Procedures for handling of dud or misfired munitions.

2.1.6.4. Procedures to ensure the control and accountability of munitions.

2.1.6.5. Range/exercise area clean-up requirements and procedures.

2.1.7. A suitable number of appropriate fire extinguishers will be available in areas where grenades, simulators, and flares are used.

2.1.8. Individuals armed with live ammunition IAW AFI 31-207, *Arming and Use of Force by Air Force Personnel*, will not participate in the exercise scenario except in an advisory or trainer capacity. Weapons will be loaded IAW AFI 31-229, *USAF Weapons Handling Procedures*, at an approved clearing barrel.

2.1.9. A minimum of at least one communications device must be readily available in case of emergency. This device must be in working order and must be tested immediately before using any explosive item. A communications link must be established.

2.1.10. In the event of an emergency, the exercise scenario will be stopped, all weapons will be saved, and personnel will await instructions from appropriate supervisory personnel.

3. Exercise Planning.

3.1. An exercise plan will be developed before each exercise (preferably 30 days) by the agency having primary responsibility (OPR). The plan will be signed by the OPR, coordinated with each additional agency directly participating (OCR), the base Fire Chief, and the Wing Weapon Safety Office. The plan format outlined in (Attachment 2) can be used for this purpose. Other formats may be used provided all information reflected in the sample is included.

3.2. Exercise plans will be prepared by the exercise OPR. The OPR, each OCR, and the Wing Weapon Safety Manager will maintain a copy.

3.3. When accomplishing the exercise plan, compile a detailed list of explosives and weapons authorized for use in the exercise. The installation commander or his designated representative (at the base where the exercise will take place) must approve the list.

3.4. Include safety personnel in the training and exercise planning.

4. Requisition of Munitions.

4.1. Once munitions requirements are identified, the OPR will coordinate through 60 EMS Munitions Management to ensure training munitions are available. The specific munitions, persons authorized or designated to draw munitions, and the scheduled pickup date/time will be included in the exercise plan IAW paragraph 3.

5. Munitions Accounting and Control.

5.1. Explosive training items, although normally containing comparatively small amounts of explosive material, can be extremely hazardous if not properly handled and used. Stringent control and accountability are essential to ensure they do not fall into the wrong hands or are used in an unauthorized manner. Experience has shown those items inadvertently left on training range/exercise areas or taken to quarters and used for pranks or experimentation can result in serious mishaps.

5.2. Accurate recording of munitions issued and expended by individuals will be accomplished as follows:

5.2.1. Munitions Issue/Turn-in Log. The individual designated to draw the munitions will make a physical inventory before departing the pickup point. The munitions custodian should use an AF Form 3126, **General Purpose Form**, or a locally designed form to record issue of munitions to individuals at the range/exercise site. The quantity expended and turned in will be recorded at the termination of the exercise. Discrepancies in accountability will be resolved before departing the range/exercise area.

5.2.2. Individuals deploying Boobytrap Simulators and M49A1 Trip Surface Flares will record the location of each simulator and flare. At the end of the exercise, inspect these areas thoroughly and collect any remaining residue. Take the residue to 60 EMS/MXMW for disposition.

6. Training for Simulators and Smoke Producing Munitions.

6.1. Unit commanders are responsible for ensuring all personnel who handle, transport, or use simulators and smoke producing munitions are properly trained.

6.2. The following applies to the use of these devices during exercises and training:

6.2.1. Only US Air Force stock listed items are authorized for use.

6.2.2. Only trained personnel can prepare and activate these devices. Explosives Ordnance Disposal (EOD) will provide training on an annual basis to personnel whose duties require them to initiate training simulators or smoke producing munitions. It is the responsibility of the user organization to request training and maintain training documentation AF Form 55, **Employee Safety and Health Record**, AF Form 623, **On-the-Job Training Record**, or Certificate of Training.

6.2.3. Personnel requiring training will call EOD Training Section to schedule training. On the day of training, personnel will report to EOD with a completed AF Form 483, **Certificate of Competency**. A control number will be assigned to the Certificate of Competency card by EOD after successfully completing the training.

6.2.4. Units requesting training will provide a minimum of two ground burst simulators and one smoke grenade for each individual requiring training. Additionally, the unit will provide one of each type munitions for EOD instructor to use as a demonstration training aid.

6.3. Minimum distances for explosive simulators.

6.3.1. Prior to functioning any simulator or smoke producing explosives device, clear all combustible material a minimum of 10 feet.

6.3.2. Personnel or vehicle: Maintain a minimum of 125 feet separation. Personnel who initiate these munitions may be closer than 125 feet, but they should be as close to 125 feet away as possible and have their back to the munitions at detonation.

6.3.3. Facilities without facing window: Maintain a minimum separation of 100 feet.

6.3.4. Facilities with facing window: Maintain a separation of 200 feet.

6.3.5. Hardened facilities, including hardened aircraft shelters: Maintain minimum separation of 50 feet.

6.3.6. Bulk petroleum, oil, and lubricant storage: Maintain a minimum separation of 200 feet.

6.3.7. Aircraft in the open: Maintain a minimum separation of 100 feet or 200 feet if aircraft are explosives loaded.

6.3.8. Explosives operating locations, holding areas, open storage areas or butler-type storage facilities: Maintain a minimum separation of 200 feet.

6.3.9. Above ground magazines of block, brick, or concrete construction and from earth covered magazines: Maintain a minimum separation of 50 feet.

6.3.10. Smoke from grenades may be toxic in high concentrations. These items, along with simulators and flares present a fire hazard. Remove combustible materials before functioning. Consider winds and fire hazards such as dry grass or fire bans. Consider using a barrier to control spread of heat during functioning of grenades.

6.3.11. Ground burst simulators or hand grenade simulators present a blast hazard. Exercise caution around people, facilities, and equipment. Clear the area of debris that could become projectiles from the blast. Monitor for proper functioning and disposal of residue. Notify EOD when a munitions malfunctions.

7. Exercise Location.

7.1. "Base X" located southwest of the 900 Aircraft Parking Area is a designed combat defense field training exercise area. Several other areas on Travis AFB could be used, depending upon the scope of the exercise, type explosives used, and moisture condition of the vegetation. Locations on other nearby military installations can also be used, depending upon the conditions outlined above. **Note:** Use of "Base X" is dependent on the type and amount of intransit explosives located in the B-Bunker

complex. Units must understand they may have to evacuate the area even though the exercise has started and they obtained prior approval.

7.2. Any site selected must be surveyed by supervisors of the agency conducting the exercise with particular consideration of the following:

- 7.2.1. Potential fire hazards to vegetation and facilities.
- 7.2.2. Availability of fire fighting equipment and personnel.
- 7.2.3. Accessibility for emergency equipment.
- 7.2.4. Ability to control accesses during the exercise.
- 7.2.5. Disruption or interference with other installation activities.
- 7.2.6. Ease of cleaning and validation of the area at the completion of the exercise.
- 7.2.7. Adverse public reaction and safety.

7.3. Obtain approval for use of the site/installation from the authority having jurisdiction. On Travis AFB, that authority is the 60 AMW/CC or designated representative (60MSG/CC). Prior to exercise planning, "Base X" use must be coordinated through 60CES/CEX for availability.

7.4. Coordinate exercise site approval with the host installation fire department and safety office.

7.5. Exercise plans developed IAW paragraph 3. will identify the installation, specific location on the installation, and the person(s) designated to coordinate/obtain approval from the agencies identified in paragraph 3. above.

8. Transportation of explosives.

8.1. Individuals operating vehicles or equipment transporting explosives will be trained and qualified to handle and transport explosives IAW TAFBI 91-104, *Explosives, Firearms, and Hazardous Materials Transportation Program*. Drivers will be identified in the exercise plan IAW paragraph 3.

8.2. Explosives will be transported in military vehicles only. Specific types of vehicle to be used will be identified in the exercise plan.

8.3. The vehicle used must be in good mechanical condition. There will be no fuel leaks or excessive oil on the engine or exhaust system. Particular attention will be given to chafing or deteriorated electrical wiring. The vehicle will be equipped with sideboards and tailgate.

8.4. A minimum of two 2A:10BC fire extinguishers will be available with the transport vehicle.

8.5. Vehicles will not be fueled with explosives on board.

8.6. Vehicles loaded with explosives will not be left unattended.

8.7. Passengers will not ride in the cargo compartment of vehicles transporting explosives.

8.8. Explosive items will be packaged, loaded, and tied down to prevent movement during transport.

8.9. Vehicle operator will be thoroughly familiar with their explosive cargo, and in the event of a mishap, breakdown, or other unusual event, will be prepared to brief emergency response personnel or local authorities on the class, quantity, and characteristics of the cargo.

8.10. ALL FIRES STARTING IN THE VICINITY OF AMMUNITIONS OR EXPLOSIVES WILL BE REPORTED AND FOUGHT IMMEDIATELY WITH ALL AVAILABLE MEANS TO PREVENT SPREADING OF FIRE AND MUNITIONS INVOLVEMENT. HOWEVER, IF THE FIRE ENGULFS EXPLOSIVE MATERIALS OR IS SUPPLYING HEAT TO IT, OR IF THE FIRE IS SO LARGE THAT IT CANNOT BE EXTINGUISHED WITH THE EQUIPMENT AT HAND, THE PERSONNEL INVOLVED SHALL EVACUATE AND SEEK SAFETY.

8.10.1. Follow fire fighting guidance in [Attachment 3](#) in all instances.

8.11. Vehicles transporting explosives will be placarded as follows:

8.11.1. Boobytrap Simulators, M116A-1 Simulators or M49A1 Trip Flares, use fire symbol 3 placards.

8.11.2. M115A2 Simulator, use fire symbol 2 placards.

8.11.3. MK 13/M124 Signals, AN-M8/M18 Smoke Grenades, or M69 Practice Grenades, no explosives placards required for on-base transport.

8.11.4. Blank 5.56mm or 7.62mm Cartridges, no placards are required.

8.11.5. When transporting explosives on Travis AFB, appropriate fire symbols or placards will be displayed on the front, back, and both sides of the vehicle. If transport is off Travis AFB, refer to TAFBI 91-104 for appropriate procedures.

8.12. Travel routes for vehicles transporting explosives on Travis AFB will be IAW TAFBI 91-104. Travel routes for explosives laden vehicles off base will be identified in the exercise plan and IAW California Highway Patrol HPH 84.3, *Explosives Routes and Stopping Places*. Off-base travel routes will avoid heavily populated areas, tunnels, narrow streets, or places where large crowds are gathered.

8.13. Smoking is not permitted in or within 50 feet of vehicles transporting explosives.

8.14. Except for emergencies, explosives laden vehicles will not stop nor park at any location between the pickup point and the destination.

9. Weapons and Ammunition Procedures.

9.1. All handguns loaded with blank, live ammunition or unloaded will be handcarried in an approved holster or approved container.

9.2. All M-16 weapons will be fitted with blank adapters prior to loading blank ammunition.

9.3. A complete search, using the buddy system, of ammo pouches, equipment, magazines, and blank ammunition will be conducted to ensure no live ammunition is introduced into the exercise scenario.

9.4. Blank ammunition and live ammunition will never be stored together in the exercise area.

9.5. Exercise personnel should check all ammunition and equipment for obvious safety defects or the presence of live ammunition.

9.6. Blank ammunition will not be fired at or toward personnel who are within 25 meters (82 ft).

9.7. If an armed person becomes sick or injured, their weapon and ammunition will be turned over to the person in charge for proper turn-in.

9.8. After the completion of any exercise using blank ammunition, the person in charge will ensure all weapons are cleared/empty prior to leaving the exercise area.

9.8.1. Upon arrival at armory or weapons storage facility all weapons must be cleared at an approved clearing barrel area.

9.8.2. If an approved clearing barrel is not available, the ground defense force commander may designate an approved area or areas where weapons handling can be performed IAW AMCP 31-1, *Air Mobility Command Arming Policy*.

10. Post Exercise Clean-up.

10.1. A thorough policing of the exercise area must be accomplished at the completion of the exercise to ensure the removal of any unexploded items or munitions residue that could be harmful to the public or used in an unauthorized manner. The clean-up effort will consist of the following, as a minimum:

10.1.1. A review of accounting and control records for accountability of munitions stocks transported to the exercise area.

10.1.2. Recovery of deployed simulators where no attempt to fire occurred.

10.1.3. Disposition of duds by EOD.

10.1.4. Close-abreast sweeping and policing of the exercise area and removal of all expended munitions residue, packing material, and other litter. Any dud munitions discovered by these sweeps will be marked for later disposal by EOD. This includes expended brass.

10.1.5. A responsible individual will validate the clean up of the exercise area. The individual must have first-hand knowledge of the clean-up efforts. The person responsible for validation will be identified in the exercise plan.

10.1.6. All expended munitions residue and packing material will be returned to 60 EMS Munitions Management for inspection and disposition IAW T.O. 11A-1-60, *Inspection of Reusable Munitions Containers and Scrap Metal Generated from Items Exposed or Containing Explosives*.

10.1.7. Unused serviceable munitions that have been removed from their shipping/storage containers will be returned to 60 EMS Munitions Management for inspection and repackaging IAW applicable technical orders.

11. Adopted Forms. AF Form 3126, AF Form 55, AF Form 623, and AF Form 483.

DENNIS M. MCCARTHY, Col, USAF
Director Wing Staff

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 91-2, *Safety Programs*

AFMAN 91-201, *Explosives Safety Standards*

AFI 31-207, *Arming and Use of Force by Air Force Personnel*

AFM 31-229, *USAF Weapons Handling Procedures*

Technical Order 11A-1-60, *Inspection of Reusable Munitions Containers and Scrap Metal Generated from Items Exposed or Containing Explosives*

California Highway Patrol Handbook, 84.3, *Explosive Material Shipments, Explosives Routes and Stopping Places*

AMCP 31-1, *Air Mobility Command Arming Policy*

TAFBI 91-104, *Explosives, Firearms, and Hazardous Materials Transportation Program*

Attachment 2

EXERCISE PLAN LETTER EXAMPLE

19 Apr 03

MEMORANDUM FOR 60MSG/CC

FROM:

SUBJECT: Combat Defense Field Training Exercise Plan

1. Purpose: *(Brief description of the type and scope of the exercise)* Security Force and Prime Beef perimeter defense exercise. Prime Beef will establish and defend their work site perimeter. Security Forces will act as the aggressor force. EOD will provide technical assistance.

2. Exercise dates and times:

<u>Date</u>	<u>Time</u>
Start	26 May 03 0900
Finish	28 May 03 2300

3. Location *(Installation and location of exercise)*. Base X, Travis AFB CA

4. Unit(s) involved:

<u>Unit</u>	<u>No. Persons</u>
60 CES/CED	5
60 SFS	25

5. Munitions:

<u>National Stock Number</u>	<u>Nomenclature</u>	<u>Hazard Class/Division</u>	<u>Quantity</u>	<u>Net Explosive Weight</u>
1305-00-182-3217	5.56mm, Blank	1.4S	1,500	1.65 lbs.
1305-00-752-8087	7.62mm, Blank	1.4S	1,250	2.75 lbs.
1330-00-289-6851	Grenade, Smoke	1.4G	25	18 lbs.
1370-00-752-8126	Simulator, Project	1.2.2G	20	2.82lbs.

6. Weapons:

<u>Nomenclature</u>	<u>Quantity</u>
M60 Machine Gun	10
M16 Rifle	35

7. Persons authorized/designed to draw munitions:

MSgt George Bullet/60 CES

TSgt Samuel Taylor/60 SFS

8. Munitions pick-up time and date: 0745/26 May 03

9. Transportation:

9.1. Government transportation will be used to transport munitions from the storage location to the exercise area. Properly trained 60 SFS/SFTC personnel will transport munitions.

9.2. Munitions Transport Route (*If off Travis AFB*) - CA Hwy 12 - I80 - etc.

10. Pre-Exercise Safety Training/Briefing: (*All participants*).

10.1. 0700 / 26 May 03 / Bldg. 904.

10.2. Designated Trainers / Briefer: MSgt Hill, 60 CES; SrA Thomas, 60 EOD.

10.3. Signature and Date of Safety Briefing:_____.

11. Person Authorized to Function / Deploy/ Expend Munitions (only personnel trained by EOD may function simulators or smoke grenades).

11.1. Blank Ammunition: 60 CES / 60 SFS exercise participants

11.2. Smoke Grenades / Pots: 60 SFS aggressor supervisors

11.3. Projectile Simulators: 60 CES / 60 SFS trainers.

12. Only EOD personnel will be authorized to retrieve/dispose of suspect or dud ammunition. All unused munitions and munitions residue will be returned to 60 EMS Munitions Management Section.

13. Person/agencies designated to accomplish post exercise clean up of the range/exercise area:

<u>Person</u>	<u>Agency</u>	<u>Signature/Date</u>
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MSgt Tim Jones	60 SFS/SFTC	_____
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14. Coordination for notification of exercise and the use of the exercise area:

14.1. 60 EMS/MXMW (Munitions) _____

14.2. 60 CES/CED (EOD) _____

14.3. 60 CES/CEF (Fire Chief) _____

14.4. 60 OSS/OSA (Airfield Management) _____

14.5. 60 SFS/CSC (Law Enforcement Desk) _____

14.6. 60 AMW/SEW (Wing Safety) _____

Squadron Commander, Major, USAF
Commander

60 AMW/CC or Designated Representative (60 MSG/CC)
Signature Block

Attachment 3

FIRE SYMBOL HAZARDS AND ACTIONS

Fire Symbol	Materials	Hazard	Action/Remarks
1	1.1 Explosives and class IV liquid propellants and 1.5 munitions	Mass Detonation	<ol style="list-style-type: none"> 1. Do not fight fire unless rescue attempt is planned. 2. If there is suitable separation to symbol 1 materials and fire chief approves, fire-fighting forces may attempt to extinguish the fire. 3. If personal safety is in doubt, take cover. 4. Evacuate personnel 4000 feet.
2	1.2.X Ammunition and explosives and 1.6 extremely insensitive detonating substances	Explosion with fragments	<ol style="list-style-type: none"> 1. Give alarm; attempt to extinguish fire if in early stage. 2. Firefighting forces should fight fire. If not possible, prevent spread of fire. 3. Detonation of items could occur. Provide protection from fragments. 4. Evacuate personnel 2500 feet.
3	1.3 Ammunition and explosives	Mass Fire	<ol style="list-style-type: none"> 1. May be fought if explosives not directly involved. 2. For fires involving HC and incendiaries use dry sand or dry powder in early stage. 3. For fires involving pyrotechnics and magnesium incendiaries. <ol style="list-style-type: none"> a. Protect adjacent facilities and equipment. b. Do not use carbon dioxide, Halon extinguishers, or water on munitions. c. Allow magnesium to cool unless upon flammable material. In this case, use a 2-inch layer of dry sand or powder on the floor, rake the burning material onto this layer, and re-smother. 4. Evacuate personnel 600 feet.
4	1.4 Ammunition and explosives	Moderate fire	<ol style="list-style-type: none"> 1. Fight these fires. 2. Expect minor explosions and hot fragments. 3. Evacuate personnel 300 feet.

Attachment 4**PRIOR TO EXERCISE SAFETY BRIEFING SAMPLE**

1. Hazards and precautions for the handling and use of the explosives involved. Ensure only blank ammunition is issued to exercise participants. **NO LIVE AMMO.** Personnel issued live ammo for security reasons will be identified and will not be exercise participants or permitted in the exercise area. Only EOD trained personnel will function simulators or smoke producing munitions. Ensure simulators are only functioned at safe distances from personnel and equipment. Only qualified personnel will be issued weapons. If you have any questions about your weapon or ammunition notify a supervisor or EET.
2. Range/exercise area safety criteria. Do not function simulators or smoke grenades in dry grass or combustibles. Ensure at least two water fire extinguishers are present and serviceable.
3. Procedures for handling of dud or misfired munitions. Only EOD personnel are allowed access to misfired or dud ammunition. Identify misfires or duds and keep non-essential personnel at least 300 feet away.
4. Procedures to ensure the control and accountability of munitions. All issued ammunition must be accounted for at the conclusion of exercise. Munitions can only be stored in a 60AMW Safety approved licensed location.
5. Range/exercise area clean-up requirements and procedures. All expended munitions residue is accountable and must be returned to 60 EMS Munitions Management. All munitions packaging and containers must be returned to Munitions Management.